***DATA STRUCTURES &***

***ALGORITHMS***

1. Placement prep
2. c/c++

***EPISODE 1. (INTRO)***

**Data Structure** are the ingredients for efficient algorithms.

Examples – arrays, linked lists, stack, queue, graphs, trees etc.

**Algorithms** are the sequence of steps to solve a problem.

Example – Sorting an array.

**Data base** – Collection of info in permanent storage for faster retrieval and updation.

**Data warehouse** – Management of huge amount of legacy data for better analysis.

**Big data –** Analysis of too large data or complex data which cannot be dealt by traditional processing applications.

**Stack** is basically a memory space where all normal data is stored. Example int I, int j etc. After the functions and main get executed the stack memory gets deleted step wise just the way it was stored stepwise.

**Heap –** It is the section where dynamic memory is allocated.

**Greedy** is an algorithmic paradigm that builds up a solution piece by piece, always choosing the next piece that offers the most obvious and immediate benefit. So the problems where choosing locally optimal also leads to global solution are best fit for Greedy.

**Algorithms-**  It describes the procedure for carrying out a task or solving a problem in a step-by-step fashion.

**Scratch-** It is a programming language. We can create programs, game and animations using scratch. It was developed by MIT’s media lab. We will be using scratch 2.0.

Int to string

std::string x1 = std::to\_string(x);